

SEQUENCE LISTING

<110> CINES, Douglas B  
HIGAZI, Abd Al-Roof

<120> COMPOSITIONS AND METHODS FOR MODULATING MUSCLE CELL AND  
TISSUE CONTRACTABILITY

<130> 9596-331

<140>  
<141>

<150> US 60/212,847

<151> 2000-06-20

<160> 18

<170> PatentIn Ver. 2.1

<210> 1

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<212> PRT

<213> Homo sapiens

<400> 1

Lys Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly Lys Ala Ser  
1 5 10 15

Thr Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser Ala Thr Val  
20 25 30

Leu Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu Gln Leu Gly  
35 40 45

Leu Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg Arg Arg Pro  
50 55 60

Trp Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln Glu Cys Met  
65 70 75 80

Val His Asp Cys Ala Asp Gly Lys  
85

<210> 2  
<211> 47  
<212> PRT

<213> Homo sapiens

<400> 2

Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys Asp Cys Leu Asn Gly  
1 5 10 15

Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile His Trp Cys Asn  
20 25 30

Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile Asp Lys Ser  
35 40 45

<210> 3

<211> 411

<212> PRT

<213> Homo sapiens

<400> 3

Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys Asp Cys Leu Asn Gly  
1 5 10 15

Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile His Trp Cys Asn  
20 25 30

Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile Asp Lys Ser Lys  
35 40 45

Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly Lys Ala Ser Thr  
50 55 60

Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser Ala Thr Val Leu  
65 70 75 80

Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu Gln Leu Gly Leu  
85 90 95

Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg Arg Pro Trp  
100 105 110

Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln Glu Cys Met Val  
115 120 125

His Asp Cys Ala Asp Gly Lys Lys Pro Ser Ser Pro Pro Glu Glu Leu  
130 135 140

Lys Phe Gln Cys Gly Gln Lys Thr Leu Arg Pro Arg Phe Lys Ile Ile  
145 150 155 160

Gly Gly Glu Phe Thr Thr Ile Glu Asn Gln Pro Trp Phe Ala Ala Ile  
165 170 175

Tyr Arg Arg His Arg Gly Gly Ser Val Thr Tyr Val Cys Gly Gly Ser  
180 185 190

Leu Ile Ser Pro Cys Trp Val Ile Ser Ala Thr His Cys Phe Ile Asp  
195 200 205

Tyr Pro Lys Lys Glu Asp Tyr Ile Val Tyr Leu Gly Arg Ser Arg Leu  
210 215 220

Asn Ser Asn Thr Gln Gly Glu Met Lys Phe Glu Val Glu Asn Leu Ile  
225 230 235 240

Leu His Lys Asp Tyr Ser Ala Asp Thr Leu Ala His His Asn Asp Ile  
245 250 255

Ala Leu Leu Lys Ile Arg Ser Lys Glu Gly Arg Cys Ala Gln Pro Ser  
260 265 270

Arg Thr Ile Gln Thr Ile Cys Leu Pro Ser Met Tyr Asn Asp Pro Gln  
275 280 285

Phe Gly Thr Ser Cys Glu Ile Thr Gly Phe Gly Lys Glu Asn Ser Thr  
290 295 300

Asp Tyr Leu Tyr Pro Glu Gln Leu Lys Met Thr Val Val Lys Leu Ile  
305 310 315 320

Ser His Arg Glu Cys Gln Gln Pro His Tyr Tyr Gly Ser Glu Val Thr  
325 330 335

Thr Lys Met Leu Cys Ala Ala Asp Pro Gln Trp Lys Thr Asp Ser Cys  
340 345 350

Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Ser Leu Gln Gly Arg Met  
355 360 365

Thr Leu Thr Gly Ile Val Ser Trp Gly Arg Gly Cys Ala Leu Lys Asp  
370 375 380

Lys Pro Gly Val Tyr Thr Arg Val Ser His Phe Leu Pro Trp Ile Arg  
385 390 395 400

Ser His Thr Lys Glu Glu Asn Gln Leu Ala Leu  
405 410

<210> 4  
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<212> PRT  
<213> Homo sapiens

<400> 4

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|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser   | Asn | Glu | Leu | His | Gln | Val | Pro | Ser | Asn | Cys | Asp | Cys | Leu | Asn | Gly |
| 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 15  |
| Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile His Trp Cys Asn |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 30  |
| Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile Asp Lys Ser Lys |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 45  |
| Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly Lys Ala Ser Thr |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 60  |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser Ala Thr Val Leu |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 80  |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu Gln Leu Gly Leu |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 95  |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg Arg Arg Pro Trp |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 110 |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln Glu Cys Met Val |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 125 |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| His Asp Cys Ala Asp Gly Lys                                     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 130   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 135 |

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<212> PRT  
<213> Homo sapiens

<400> 5

|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys   | Pro | Ser | Ser | Pro | Pro | Glu | Glu | Leu | Lys | Phe | Gln | Cys | Gly | Gln | Lys |
| 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 15  |
| Thr Leu Arg Pro Arg Phe Lys Ile Ile Gly Gly Glu Phe Thr Thr Ile |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 30  |

Glu Asn Gln Pro Trp Phe Ala Ala Ile Tyr Arg Arg His Arg Gly Gly  
35 40 45

Ser Val Thr Tyr Val Cys Gly Gly Ser Leu Ile Ser Pro Cys Trp Val  
50 55 60

Ile Ser Ala Thr His Cys Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr  
65 70 75 80

Ile Val Tyr Leu Gly Arg Ser Arg Leu Asn Ser Asn Thr Gln Gly Glu  
85 90 95

Met Lys Phe Glu Val Glu Asn Leu Ile Leu His Lys Asp Tyr Ser Ala  
100 105 110

Asp Thr Leu Ala His His Asn Asp Ile Ala Leu Leu Lys Ile Arg Ser  
115 120 125

Lys Glu Gly Arg Cys Ala Gln Pro Ser Arg Thr Ile Gln Thr Ile Cys  
130 135 140

Leu Pro Ser Met Tyr Asn Asp Pro Gln Phe Gly Thr Ser Cys Glu Ile  
145 150 155 160

Thr Gly Phe Gly Lys Glu Asn Ser Thr Asp Tyr Leu Tyr Pro Glu Gln  
165 170 175

Leu Lys Met Thr Val Val Lys Leu Ile Ser His Arg Glu Cys Gln Gln  
180 185 190

Pro His Tyr Tyr Gly Ser Glu Val Thr Thr Lys Met Leu Cys Ala Ala  
195 200 205

Asp Pro Gln Trp Lys Thr Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro  
210 215 220

Leu Val Cys Ser Leu Gln Gly Arg Met Thr Leu Thr Gly Ile Val Ser  
225 230 235 240

Trp Gly Arg Gly Cys Ala Leu Lys Asp Lys Pro Gly Val Tyr Thr Arg  
245 250 255

Val Ser His Phe Leu Pro Trp Ile Arg Ser His Thr Lys Glu Glu Asn  
260 265 270

Gly Leu Ala Leu  
275

<210> 6  
<211> 403  
<212> PRT  
<213> Homo sapiens

<400> 6

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Asn | Glu | Leu | His | Gln | Val | Pro | Ser | Asn | Cys | Asp | Cys | Leu | Asn | Gly |
| 1   |     | 5   |     |     |     |     | 10  |     |     |     |     |     |     | 15  |     |

Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile His Trp Cys Asn

|    |  |    |  |    |  |  |  |  |  |  |  |  |  |  |  |
|----|--|----|--|----|--|--|--|--|--|--|--|--|--|--|--|
| 20 |  | 25 |  | 30 |  |  |  |  |  |  |  |  |  |  |  |
|----|--|----|--|----|--|--|--|--|--|--|--|--|--|--|--|

Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile Asp Lys Ser Lys

|    |  |    |  |    |  |  |  |  |  |  |  |  |  |  |  |
|----|--|----|--|----|--|--|--|--|--|--|--|--|--|--|--|
| 35 |  | 40 |  | 45 |  |  |  |  |  |  |  |  |  |  |  |
|----|--|----|--|----|--|--|--|--|--|--|--|--|--|--|--|

Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly Lys Ala Ser Thr

|    |  |    |  |    |  |  |  |  |  |  |  |  |  |  |  |
|----|--|----|--|----|--|--|--|--|--|--|--|--|--|--|--|
| 50 |  | 55 |  | 60 |  |  |  |  |  |  |  |  |  |  |  |
|----|--|----|--|----|--|--|--|--|--|--|--|--|--|--|--|

Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser Ala Thr Val Leu

|    |  |    |  |    |  |    |  |  |  |  |  |  |  |  |  |
|----|--|----|--|----|--|----|--|--|--|--|--|--|--|--|--|
| 65 |  | 70 |  | 75 |  | 80 |  |  |  |  |  |  |  |  |  |
|----|--|----|--|----|--|----|--|--|--|--|--|--|--|--|--|

Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu Gln Leu Gly Leu

|    |  |    |  |    |  |  |  |  |  |  |  |  |  |  |  |
|----|--|----|--|----|--|--|--|--|--|--|--|--|--|--|--|
| 85 |  | 90 |  | 95 |  |  |  |  |  |  |  |  |  |  |  |
|----|--|----|--|----|--|--|--|--|--|--|--|--|--|--|--|

Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg Arg Arg Pro Trp

|     |  |     |  |     |  |  |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|--|--|
| 100 |  | 105 |  | 110 |  |  |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|--|--|

Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln Glu Cys Met Val

|     |  |     |  |     |  |  |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|--|--|
| 115 |  | 120 |  | 125 |  |  |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|--|--|

His Asp Cys Ala Asp Gly Lys Leu Lys Phe Gln Cys Gly Gln Lys Thr

|     |  |     |  |     |  |  |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|--|--|
| 130 |  | 135 |  | 140 |  |  |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|--|--|

Leu Arg Pro Arg Phe Lys Ile Ile Gly Gly Glu Phe Thr Thr Ile Glu

|     |  |     |  |     |  |     |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|
| 145 |  | 150 |  | 155 |  | 160 |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|

Asn Gln Pro Trp Phe Ala Ala Ile Tyr Arg Arg His Arg Gly Gly Ser

|     |  |     |  |     |  |  |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|--|--|
| 165 |  | 170 |  | 175 |  |  |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|--|--|

Val Thr Tyr Val Cys Gly Gly Ser Leu Ile Ser Pro Cys Trp Val Ile

|     |  |     |  |     |  |  |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|--|--|
| 180 |  | 185 |  | 190 |  |  |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|--|--|

Ser Ala Thr His Cys Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr Ile

|     |  |     |  |     |  |  |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|--|--|
| 195 |  | 200 |  | 205 |  |  |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|--|--|

Val Tyr Leu Gly Arg Ser Arg Leu Asn Ser Asn Thr Gln Gly Glu Met

|     |  |     |  |     |  |  |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|--|--|
| 210 |  | 215 |  | 220 |  |  |  |  |  |  |  |  |  |  |  |
|-----|--|-----|--|-----|--|--|--|--|--|--|--|--|--|--|--|

Lys Phe Glu Val Glu Asn Leu Ile Leu His Lys Asp Tyr Ser Ala Asp  
225 230 235 240

Thr Leu Ala His His Asn Asp Ile Ala Leu Leu Lys Ile Arg Ser Lys  
245 250 255

Glu Gly Arg Cys Ala Gln Pro Ser Arg Thr Ile Gln Thr Ile Cys Leu  
260 265 270

Pro Ser Met Tyr Asn Asp Pro Gln Phe Gly Thr Ser Cys Glu Ile Thr  
275 280 285

Gly Phe Gly Lys Glu Asn Ser Thr Asp Tyr Leu Tyr Pro Glu Gln Leu  
290 295 300

Lys Met Thr Val Val Lys Leu Ile Ser His Arg Glu Cys Gln Gln Pro  
305 310 315 320

His Tyr Tyr Gly Ser Glu Val Thr Thr Lys Met Leu Cys Ala Ala Asp  
325 330 335

Pro Gln Trp Lys Thr Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu  
340 345 350

Val Cys Ser Leu Gln Gly Arg Met Thr Leu Thr Gly Ile Val Ser Trp  
355 360 365

Gly Arg Gly Cys Ala Leu Lys Asp Lys Pro Gly Val Tyr Thr Arg Val  
370 375 380

Ser His Phe Leu Pro Trp Ile Arg Ser His Thr Lys Glu Glu Asn Gly  
385 390 395 400

Leu Ala Leu

<210> 7  
<211> 323  
<212> PRT  
<213> Homo sapiens

<400> 7  
Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys Asp Cys Leu Asn Gly  
1 5 10 15

Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile His Trp Cys Asn

20

25

30

Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile Asp Lys Ser Lys  
 35 40 45

Pro Ser Ser Pro Pro Glu Glu Leu Lys Phe Gln Cys Gly Gln Lys Thr  
 50 55 60

Leu Arg Pro Arg Phe Lys Ile Ile Gly Gly Glu Phe Thr Thr Ile Glu  
 65 70 75 80

Asn Gln Pro Trp Phe Ala Ala Ile Tyr Arg Arg His Arg Gly Gly Ser  
 85 90 95

Val Thr Tyr Val Cys Gly Gly Ser Leu Ile Ser Pro Cys Trp Val Ile  
 100 105 110

Ser Ala Thr His Cys Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr Ile  
 115 120 125

Val Tyr Leu Gly Arg Ser Arg Leu Asn Ser Asn Thr Gln Gly Glu Met  
 130 135 140

Lys Phe Glu Val Glu Asn Leu Ile Leu His Lys Asp Tyr Ser Ala Asp  
 145 150 155 160

Thr Leu Ala His His Asn Asp Ile Ala Leu Leu Lys Ile Arg Ser Lys  
 165 170 175

Glu Gly Arg Cys Ala Gln Pro Ser Arg Thr Ile Gln Thr Ile Cys Leu  
 180 185 190

Pro Ser Met Tyr Asn Asp Pro Gln Phe Gly Thr Ser Cys Glu Ile Thr  
 195 200 205

Gly Phe Gly Lys Glu Asn Ser Thr Asp Tyr Leu Tyr Pro Glu Gln Leu  
 210 215 220

Lys Met Thr Val Val Lys Leu Ile Ser His Arg Glu Cys Gln Gln Pro  
 225 230 235 240

His Tyr Tyr Gly Ser Glu Val Thr Thr Lys Met Leu Cys Ala Ala Asp  
 245 250 255

Pro Gln Trp Lys Thr Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu  
 260 265 270

Val Cys Ser Leu Gln Gly Arg Met Thr Leu Thr Gly Ile Val Ser Trp

275

280

285

Gly Arg Gly Cys Ala Leu Lys Asp Lys Pro Gly Val Tyr Thr Arg Val  
290 295 300

Ser His Phe Leu Pro Trp Ile Arg Ser His Thr Lys Glu Glu Asn Gly  
305 310 315 320

Leu Ala Leu

<210> 8

<211> 143

<212> PRT

<213> Homo sapiens

<400> 8

Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys Asp Cys Leu Asn Gly  
1 5 10 15

Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile His Trp Cys Asn  
20 25 30

Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile Asp Lys Ser Lys  
35 40 45

Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly Lys Ala Ser Thr  
50 55 60

Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser Ala Thr Val Leu  
65 70 75 80

Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu Gln Leu Gly Leu  
85 90 95

Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg Arg Arg Pro Trp  
100 105 110

Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln Glu Cys Met Val  
115 120 125

His Asp Cys Ala Asp Gly Lys Lys Pro Ser Ser Pro Pro Glu Glu  
130 135 140

<210> 9

<211> 96

<212> PRT

<213> Homo sapiens

<400> 9

Lys Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly Lys Ala Ser  
1 5 10 15

Thr Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser Ala Thr Val  
20 25 30

Leu Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu Gln Leu Gly  
35 40 45

Leu Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg Arg Arg Pro  
50 55 60

Trp Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln Glu Cys Met  
65 70 75 80

Val His Asp Cys Ala Asp Gly Lys Lys Pro Ser Ser Pro Pro Glu Glu  
85 90 95

<210> 10

<211> 264

<212> DNA

<213> Homo sapiens

<400> 10

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agatctgatg ctcttcagct gggcctgggg aaacataatt actgcagggaa cccagacaac 180  
cggaggcgac cctggtgcta tgtgcaggtg ggcctaaagc cgcttgtcca agagtgcatg 240  
gtgcattgact gcgcagatgg aaaa 264

<210> 11

<211> 141

<212> DNA

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<400> 11

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tccaaacaagt acttctccaa cattcaactgg tgcaactgcc caaagaatt cggagggcag 120  
cactgtgaaa tagataagtc a 141

<210> 12  
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aaggccagca ctgacaccat gggccggccc tgccctgcctt ggaactctgc cactgtcctt 240  
cagcaaacgt accatgccc cagatctgtat gctcttcagc tgggcctggg gaaacataat 300  
tactgcagga acccagacaa ccggaggcga ccctgggtgt atgtgcaggt gggcctaaag 360  
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ccagaagaat taaaattca gtgtggccaa aagactctga ggccccgc tt a a g a t t a t t 480  
gggggagaat tcaccaccat cgagaaccag ccctgggtt cggccatcta caggaggcac 540  
cgggggggct ctgtcaccta cgtgtgtgga ggcagcctca tca g c c t t g c t g g g t g a t c 600  
agcgccacac actgttcat tgattaccca aagaaggagg actacatcg t c a c t c t g g g t 660  
cgctcaaggc ttaactccaa cacgcaaggg gagatgaagt ttgaggtgga a a a c c t c a t c 720  
ctacacaaagg actacagcgc tgacacgctt gtcaccaca acgacattgc cttgctgaag 780  
atccgttcca aggagggcag gtgtgcgcag ccattccgga ctatacagac catctgcctg 840  
ccctcgatgt ataacgatcc ccagttggc acaagctgtg agatcactgg cttggaaaaa 900  
gagaattcta ccgactatct ctatccggag cagctgaaaa tgactgtgt gaagctgatt 960  
tcccacccggg agtgcagca gccccactac tacggctctg aagtaccac caaaatgcta 1020  
tgtgctgtcg acccccaatg gaaaacagat tcctgcccagg gagactcagg gggacccctc 1080  
gtctgttccc tccaaggccg catgactttg actgaaattg tgagctgggg ccgtggatgt 1140  
gccctgaagg acaagccagg cgtctacacg agagtctcac acttcttacc ctggatccgc 1200  
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<210> 13  
<211> 405  
<212> DNA  
<213> Homo sapiens

<400> 13  
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cactgtgaaa tagataagtc aaaaacctgc tatgagggga atggtcactt ttaccgagga 180  
aaggccagca ctgacaccat gggccggccc tgccctgcctt ggaactctgc cactgtcctt 240  
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<213> Homo sapiens

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